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76

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The report presents the current status of the Federally owned facilities within the Metropolitan Memphis Air Quality Control Region with regard to the implementation of the objectives prescribed by the Clean Air Act, as amended. The metropolitan Memphis region encompasses portions of three states and lies within the county boundaries of: Crittenden County in the State of Arkansas, Desoto County in the State of Mississippi, and Shelby County in the State of Tennessee. The data in this report are the most recently available and reflect the current fuel usage, refuse disposal practices, air pollution emissions and proposed abatement measures for the listed installations.

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APTD-1302

AIR POLLUTION REPORT

FEDERAL FACILITIES

METROPOLITAN MEMPHIS INTERSTATE

AIR QUALITY CONTROL REGION

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FEDERAL SOURCES BRANCH
DIVISION OF COMPLIANCE
AIR POLLUTION CONTROL OFFICE
ROCKVILLE, MARYLAND

MAY 1971

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TABLE OF CONTENTS

		PAGE
NARRATIVE		1
FIGURE 1.	MAP OF DESIGNATED AIR QUALITY CONTROL REGION	2
TABLE I.	FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES	3
TABLE II.	ANNUAL FUEL USE BY FEDERAL FACILITIES	12
TABLE III.	FEDERAL CONTRIBUTION TO AIR POLLUTION	13
TABLE IV.	FEDERAL POINT SOURCES	14
TABLE V.	ABATEMENT PROGRAM FOR FEDERAL PROBLEM AREAS	15
TABLE VI.	POLLUTANT REDUCTION GOALS	16
REFERENCES AND NOTES		17

NARRATIVE

This report presents the current status of the Federally owned facilities within the Metropolitan Memphis Air Quality Control Region with regard to the implementation of the objectives prescribed by the Clean Air Act, as amended. The data in this report are the most recently available and reflect the current fuel usage, refuse disposal practices, air pollution emissions and proposed abatement measures for the listed installations.

I. BOUNDARIES OF THE AIR QUALITY CONTROL REGION

On April 29, 1970, the Metropolitan Memphis Air Quality Control Region was designated pursuant to section 107(a) of the Clean Air Act, as amended. The Region encompasses portions of three states (Figure 1) and lies within the county boundaries of: Crittenden County in the State of Arkansas; Desoto County in the State of Mississippi; and Shelby County in the State of Tennessee.

II. NUMBER OF FEDERAL FACILITIES

There are 52 Federal installations within the Region and of these only 17 are involved in burning either fossil fuels or refuse. Table I is a listing of these facilities and the quantities of fuel and refuse burned by each. Table II is a summary of the total annual fuel usage for the respective Counties within the Region.

III. FEDERAL CONTRIBUTIONS TO AIR POLLUTION

The Federal facilities within the Metropolitan Memphis Air Quality Control Region emit annually a total of 104 tons of carbon monoxide (CO), 54 tons of nitrogen oxides (NO_x), 38 tons of sulfur oxides (SO_x), 18 tons of particulates, and 2 tons of hydrocarbons (HC). These emissions, as summarized in Table III, contribute slightly less than 1% of the total particulates and sulfur oxides from all stationary sources within the area.

Emissions from transportation sources were not included in this report, but will be covered in a subsequent report of air pollution emissions from mobile sources. Identifiable annual aircraft emissions are estimated to total 10,000 tons of carbon monoxide, 2000 tons of hydrocarbons, 600 tons of nitrogen oxides and 200 tons of particulates.

There are no Federal sources of pollution which emit more than 100 tons/year (point sources) of one or more of the pollutants listed in Table III.

IV. REMEDIAL ABATEMENT MEASURES PROPOSED

One Federal facility as listed in Table V, reported air pollution problems and/or proposed remedial measures in their 1967-1972 five year abatement plan. These actions and the expected reductions in the air pollution emissions produced by this facility when all of the abatement plans have been put into effect are presented by Table VI.

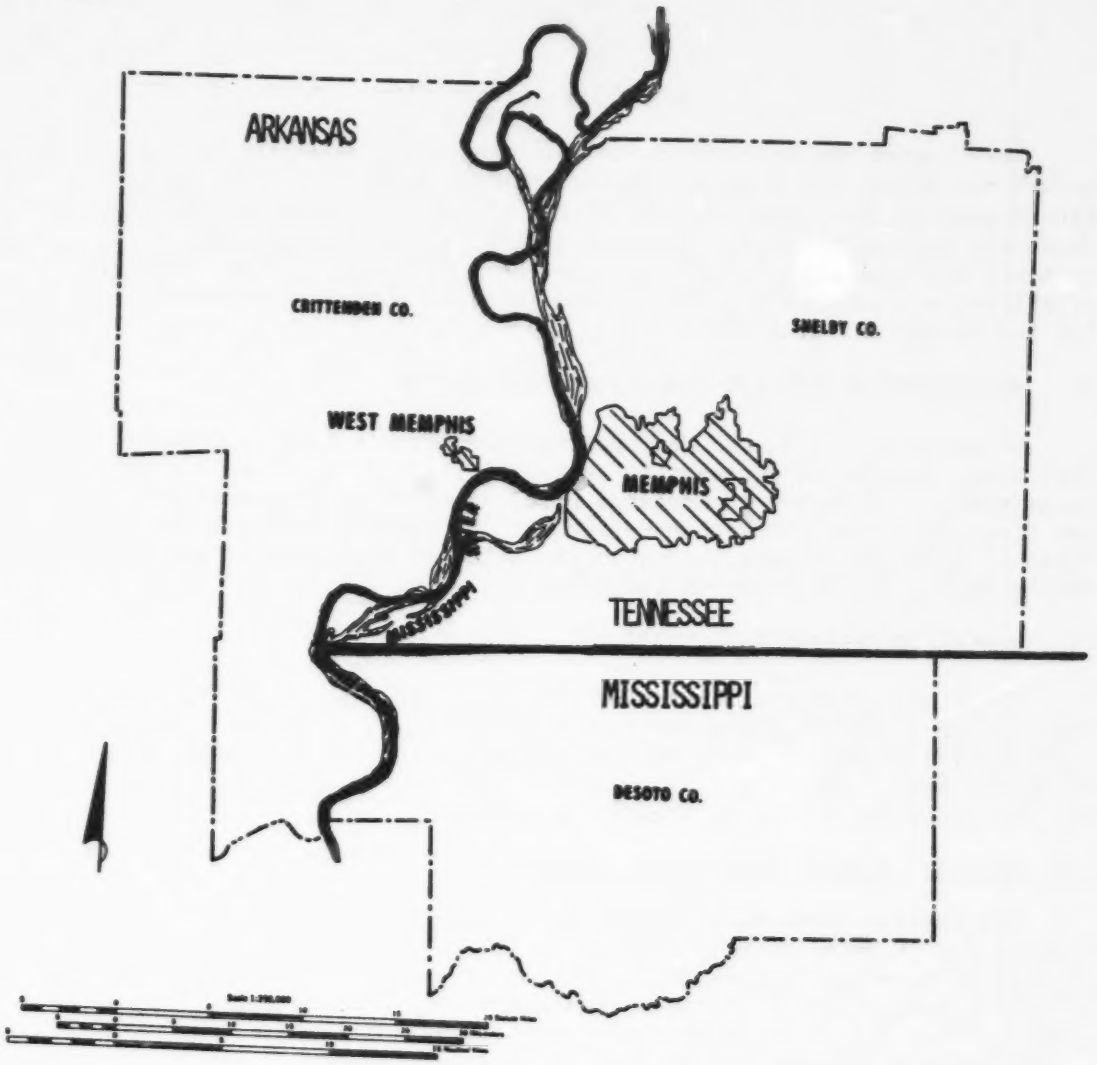

FIGURE 2

METROPOLITAN MEMPHIS INTERSTATE

AIR QUALITY CONTROL REGION

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
ARKANSAS CRITTENDEN TURRELL							
WAPANOCCA WLDF REFUGE	15	0	0	0	0	0	BURN LP GAS
ARKANSAS CRITTENDEN WEST MEMPHIS							
POST OFFICE WEST MEMPHIS	0	0	1452	0	0	0	REFUSE COLLECTED
FAA-H 14151	0	0	0	0	0	0	HOMING BEACON
MISSISSIPPI DESOTO BYHALIA							
FAA-ARSR 14156	0	0	0	0	0	0	LONG/RANGE RADAR
MISSISSIPPI DESOTO HERNANDO							
FAA-RMLR 14148	0	0	0	0	0	0	RADAR MICRO WAVE LINK

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
FAA-VTAC 14157	0	0	0	0	0	0	RANGE/DIRECT AID
MISSISSIPPI DESOTO OLIVE BRANCH							
FAA-OM 14150	0	0	0	0	0	0	OUTER MARKER
FAA-RCAG 14159	0	0	0	0	0	0	VHF RADIO EQUIPMENT
MISSISSIPPI DESOTO NO CITY ID							
ARKABUTLA RESERVOIR	0	0	0	0	0	0	
TENNESSEE SHELBY MEMPHIS							
NAVAL AIR STATION	0	7500	762	222000	233000	0	REFUSE COLLECTED

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
R & R DIST HDQTRS	0	0	0	0	0	0	INACTIVE
NAVAL HOSPITAL	0	0	104	0	0	0	REFUSE COLLECTED
RESERVE TRC CENTER	0	0	4	0	0	0	REFUSE COLLECTED
ARMY DEFENSE DEPOT	0	1	268645	0	0	0	
MEMPHIS NAT CEMETERY	0	0	8	0	0	0	REFUSE COLLECTED
USARC MEMPHIS	0	0	3459	0	0	0	REFUSE COLLECTED
MEMPHIS MAP	0	0	454	0	0	0	REFUSE COLLECTED

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
PO DESOTO STATION	0	0	5496	0	0	0	
POST OFFICE 1 FRONT ST	0	0	20844	0	0	0	
VA HOSPITAL 1030 JEFF AV	0	2633	128000	5747	0	0	
FEDERAL BLDG 167 N. MAIN	0	0	2080	0	0	0	REFUSE COLLECTED
PO GARAGE ST PAUL ST	0	0	208	0	0	0	
MOTOR POOL SITE 2ND ST	0	0	0	0	0	0	ELECTRIC HEAT
FAA-ASR 14145	0	0	0	0	0	0	AIRPORT RADAR

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
FAA-RMLR 14646	0	0	0	0	0	0	RADAR MICRO WAVE LINK
FAA-ALSF 14149	0	0	0	0	0	0	APPROACH LIGHT SYSTEM
FAA-OM 14152	0	0	0	0	0	0	OUTER MARKER
FAA-GS 14153	0	0	0	0	0	0	VERTICAL NAV AID
FAA-GS 14154	0	0	0	0	0	0	VERTICAL NAV AID
FAA-RTR 14155	0	0	0	0	0	0	TRANSMITTER/ RECEIVER
FAA-RCAG 14158	0	0	0	0	0	0	VAF RADIO EQUIPMENT

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
FAA-ARTCC 14160	0	3	8	0	0	0	
FAA-UVDF 14182	0	0	0	0	0	0	DIRECTIONAL FINDER
FAA-RTR 14183	0	0	0	0	0	0	TRANSMITTER/ RECEIVER
FAA-SX 14184	0	0	0	0	0	0	NAVIGATIONAL AID
FAA-ATCT 14191	0	0	0	0	0	0	AIR TRAFFIC CONTROL TOWR
FAA-VASI 14199	0	0	0	0	0	0	LANDING LIGHTS
FAA-QS 14207	0	0	0	0	0	0	STORAGE AREA

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
FAA-MM 14231	0	0	0	0	0	0	MIDDLE MARKER
FAA-LOC 14232	0	0	0	0	0	0	HORIZONTAL NAV AID
FAA-LOC 14233	0	0	0	0	0	0	HORIZONTAL NAV AID
FAA-MM 14234	0	0	0	0	0	0	MIDDLE MARKER
FAA-TM 14252	0	0	0	0	0	0	MARKER
PHS HOSPITAL	0	0	0	0	0	0	PROPERTY FOR GSA DISPOSAL
MEMPHIS PUBLIC HSING	0	0	0	0	0	0	HEAT FURNISHED

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
MEMPHIS DEPOT	0	0	633	C	0	0	REFUSE COLLECTED
DEPOT MEMPHIS	0	0	0	0	0	0	DONATED TO CITY
BOAT & STORE YARD	0	0	0	0	0	0	NO LONGER IN OPERATION
MEMPHIS NEW M & R DEPOT	0	0	13175	0	0	0	
TENNESSEE SHELBY BRUNSWICK							
FAA-RMLR 14146	0	0	0	0	0	0	RADAR MICRO WAVE LINK
TENNESSEE SHELBY NO CITY ID							
VOR 24613	0	0	0	0	0	0	VERTICAL NAV AID

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
AIR STATION HOUSING	0	0	0	0	0	0	INCLUDED IN AIR STATION

TABLE II

ANNUAL FUEL USE BY FEDERAL FACILITIES

	COAL (TONS)	RESID OIL (GAL)	DIST OIL (GAL)	GAS (MCF)
ARKANSAS				
CRITTENDEN	0	0	0	1452
MISSISSIPPI				
DESOTO	0	0	0	0
TENNESSEE				
SHELBY	0	233000	227747	443880
TOTAL	0	233000	227747	445332

TABLE III

FEDERAL CONTRIBUTION TO AIR POLLUTION (TONS/YEAR)

	SOX	NOX	CO	PART	HC
ARKANSAS					
CRITTENDEN	0	0	0	0	0
STATE TOTAL	0	0	0	0	0
MISSISSIPPI					
DESOTO	0	0	0	0	0
STATE TOTAL	0	0	0	0	0
TENNESSEE					
SHELBY	38	54	104	18	2
STATE TOTAL	38	54	104	18	2
AREA TOTAL	38	54	104	18	2

NOTE: (1) EMISSIONS REPORTED IN SIGNIFICANT FIGURES
(2) EMISSIONS LESS THAN 0.5 TONS/YR REPORTED AS ZERO

TABLE IV

FEDERAL POINT SOURCES
(TONS/YEAR)

SOX	NOX	CO	PART	HC

NO FEDERAL POINT

SOURCES

IN THIS REGION

NOTE: (1) A POINT SOURCE IS AN INSTALLATION WHICH EMITS OVER 100 TONS/YEAR OF ONE OR MORE OF THE FIVE POLLUTANTS

TABLE V

ABATEMENT PROGRAM FOR FEDERAL PROBLEM AREAS

IN THE

METROPOLITAN MEMPHIS INTERSTATE

AIR QUALITY CONTROL REGION

A. Statement of problem
B. Abatement measures proposed in five year plan*
C. Status of proposed abatement measures

TENNESSEE

SHELBY

MEMPHIS

Naval Air Station

1. A. Open burning of refuse
   B. Discontinue open burning and initiate the hauling of this refuse to a city landfill
   C. Project has been operational since 1970

2. A. Inefficient incineration of classified waste
   B. Proposed construction of a new incinerator
   C. Funds requested for FY 1972

3. A. Smoke emissions from a firefighting school
   B. Abatement measures postponed until the results of a study for a similar type problem at Orlando, Florida is completed by the Navy Training Center
   C. Request for project funding postponed until post 1973

*1967-72 plan per Executive Order 11282, superseded by Executive Order 11507

TABLE VI

POLLUTANT REDUCTION GOALS
(TONS/YEAR)

	SOX	NOX	CO	PART	HC
ARKANSAS					
CRITTENDEN	---	---	--	--	--
STATE TOTAL	---	---	--	--	--
MISSISSIPPI					
DESOTO	---	---	--	--	--
STATE TOTAL	---	---	--	--	--
TENNESSEE					
SHELBY	neg	neg	16	3	neg
STATE TOTAL	neg	neg	16	3	neg
AREA TOTAL	neg	neg	16	3	neg

NOTE: THESE REDUCTIONS WILL RESULT FROM ABATEMENT MEASURES PROPOSED, BUT NOT YET ACCOMPLISHED, IN THE FIVE-YEAR PLAN.

REFERENCES AND NOTES

1. Duprey, R.L., Compilation of Air Pollutant Emission Factors, Public Health Service Publication No. 999-AP-42, 1968.

   All calculated emissions are based on these factors.

2. Report of Consultation on the Metropolitan Memphis Interstate Air Quality Control Region, Public Health Service December, 1969.

   Data on emissions from all sources used to calculate percent government contribution were obtained from this report.

3. Clean Air Act, as amended (42 U.S.C. 1857 - 1857L) Sec 107, Sec 111. November 21, 1967.

4. Executive Order 11507, Prevention, Control, and Abatement of Air and Water Pollution at Federal Facilities, February 4, 1970.

5. Title 42 - Public Health, Chapter I, Subchapter F, Part 76, June 2, 1966.

6. Bureau of the Budget Circular A-78, May 18, 1970.

7. 1970 GSA Listing of Real Property owned by the Federal Government.